

**EASTMAN**

Eastman Chemical Company  
P. O. Box 431  
Kingsport, Tennessee 37662

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October 2, 1998

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Attn: TSCA Section 8(e)  
Room G99 East Tower  
Office of Pollution Prevention and Toxics  
U. S. Environmental Protection Agency  
401 M Street, S.W.  
Washington, DC 20460-0001

8EHQ-98-14289  
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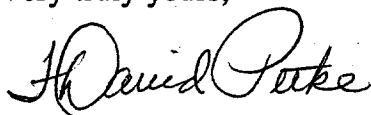
Ladies and Gentlemen:

Eastman Chemical Company submits the following *preliminary* report as required under TSCA §8(e) for your consideration.

**Eye Irritation Study of 2-Methyl-1,3-pentanediol in Rabbits**

If you have questions, you may contact me by telephone at (423) 229-4274 or the technical contact, Karen R. Miller, Ph.D., at (423) 229-1654.

Very truly yours,



F. David Petke, Ph.D.  
Senior Technical Associate  
Product Safety and Stewardship

cc: 8(e) file

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## TSCA HEALTH &amp; SAFETY STUDY COVER SHEET - revised 6/25/96

## TSCA CBI STATUS:

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<b>1.0 SUBMISSION TYPE</b> <input type="checkbox"/> Contains CBI		Submission date: October 1, 1998	
<input type="checkbox"/> 8(d) <input checked="" type="checkbox"/> 8(e) <input type="checkbox"/> FYI <input type="checkbox"/> 4 <input type="checkbox"/> Other: specify <input checked="" type="checkbox"/> Initial submission <input type="checkbox"/> Follow-up submission <input type="checkbox"/> Final report submission Previous EPA Submission or Title if Update or Follow-up: _____		Docket Number, if any: # _____	
<input type="checkbox"/> continuation sheet attached			
<b>2.1 SUMMARY/ABSTRACT ATTACHED</b>		<b>2.2 SUBMITTER TRACKING NUMBER OR INTERNAL ID</b>	
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		8(e)98-8	
<b>2.3 FOR EPA USE ONLY</b>			
<b>3.0 CHEMICAL/TEST SUBSTANCE IDENTITY</b> <input type="checkbox"/> Contains CBI			
<u>Reported Chemical Name (specify nomenclature if other than CAS name):</u> CAS #: 149-31-5    2-methyl-1,3-pentanediol Purity: >99% <input checked="" type="checkbox"/> Single Ingredient <input type="checkbox"/> Commercial/Technical Grade <input type="checkbox"/> Mixture    Trade Name: _____    Common Name: _____			
Other chemical(s) present in tested mixture		% WEIGHT	
CAS Number		Name	
Not known			
<input type="checkbox"/> continuation sheet attached		 8EHQ-98-14289	
<b>4.0 REPORT/STUDY TITLE</b> <input type="checkbox"/> Contains CBI			
Preliminary Results of Eye Irritation of 2-methyl-1,3-pentanediol in the Rabbit			
<input type="checkbox"/> continuation sheet attached			
<b>5.1 STUDY/TSCATS INDEXING TERMS</b>			
[CHECK ONE]			
HEALTH EFFECTS (HE): X		ENVIRONMENTAL EFFECTS (EE):	
		ENVIRONMENTAL FATE (EF):	
<b>5.2 STUDY/TSCATS INDEXING TERMS</b> (see instructions for 4-digit codes)			
STUDY	SUBJECT ORGANISM	ROUTE OF	VEHICLE OF
TYPE: ATOX	(HE,EE only): RABB	EXPOSURE (HE only):	EXPOSURE (HE only):
Other:	Other:	Other: Direct	Other: Direct
<b>6.0 REPORT/STUDY INFORMATION</b> <input type="checkbox"/> Contains CBI <input type="checkbox"/> Study is GLP			
Laboratory: <u>Health and Environment Laboratories, Eastman Kodak Company</u>		Report/Study Date: <u>Not available</u>	
1100 Ridgeway Avenue, Rochester, NY 14652			
Source of Data/Study Sponsor (if different than submitter)		Number of Pages: <u>Not known</u>	
<input type="checkbox"/> continuation sheet attached			
<b>7.0 SUBMITTER INFORMATION</b> <input type="checkbox"/> Contains CBI			
Submitter: <u>Marc G. Schurger</u>		Title: <u>Director, Product Safety and Stewardship</u>	
Company Name: <u>Eastman Chemical Company</u>		Company Address: <u>P. O. Box 431, Kingsport TN 37662-5280</u>	
Submitter Address (if different):		Phone: <u>(423) 229-5921</u>	
Technical Contact: <u>Karen R. Miller, Ph.D.</u>		Phone: <u>(423) 229-1654</u>	
<input type="checkbox"/> continuation sheet attached			
<b>8.0 ADDITIONAL/OPTIONAL STUDY COMMENTS</b> <input type="checkbox"/> Contains CBI			
 88990000008			
<input checked="" type="checkbox"/> continuation sheet attached			

Submitter Signature: Marc G. SchurgerDate: 10/1/98

## 9.0 CONTINUATION SHEET

## TSCA CBI STATUS:

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Submitter Tracking Number/Internal ID

8E-98-8

## Preliminary Results for 2-Methyl-1,3-Pentanediol Eye Irritation

Preliminary results from an eye irritation study of 2-methyl-1,3-pentanediol showed the potential for irreversible eye damage. A single dose of 0.1 mL of the test substance was administered into the conjunctival sac of one eye of each of two rabbits. Immediately after administration, the treated eye of one animal was washed with distilled water. The other treated eye was not irrigated.

The observations for the unwashed eye are as follows: After 24 hours, scattered or diffuse areas of opacity (grade 1)\* extended over the entire area, severe redness (grade 3), moderate chemosis (grade 2), and slight discharge (grade 1) were observed. Staining of the conjunctivae and cornea was apparent when fluorescein dye was applied at the 24 hour examination. After 48 hours, there was no corneal opacity, moderate redness (grade 2), and moderate chemosis (grade 2). On day 7, the signs of irritation were similar to that for 48 hours with the addition of slight iris effects (grade 1) and the reoccurrence of slight discharge (grade 1). On day 10, severe redness (grade 3), severe chemosis (grade 3), slight discharge (grade 1) severe corneal opacity (grade 3) over the entire area, and slight pannus (grade 1) were observed. On day 11, all effects remained the same with the exception of a reduction in the severity of corneal opacity (grade 1 over entire area). Because the corneal effects suddenly appeared on day 10 and were substantially reduced by day 11, it is unclear whether this effect was due to exposure to the chemical. The study laboratory believed that the condition was permanent and terminated the study at this point.

The observations for the washed eye are as follows: After 24 hours, scattered or diffuse areas of opacity (grade 1) extended over the entire area, moderate redness (grade 2), moderate chemosis (grade 2), and a slight discharge (grade 1) were observed. Staining of the conjunctivae and cornea was apparent when fluorescein dye was applied at the 24 hour examination. After 48 hours, all of the effects remained the same with the exception of increased discharge (grade 2) and slight iris effects (grade 1). On day 7, there was no corneal opacity, severe redness (grade 3), slight chemosis (grade 1), no iris effects or discharge. On day 10, only slight redness and chemosis were observed (grade 1). The effects remained the same on day 11. Therefore, immediate washing of the eye with water appeared to reduce the irritative effect.

A copy of the final report will be provided when it is received from the study laboratory.

\*Graded as described in OECD Guideline 405 (Annex V., Test b.5)(Grading for Ocular Lesions)